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ANNUAL REPORT

TO

THE UNITED STATES CONGRESS,

FISCAL YEAR 1972

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NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM (v.i.s.).

NATIONAL INSTITUTE OF MENTAL HEALTH

HEALTH SERVICES AND MENTAL HEALTH ADMINISTRATION

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE



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PREFACE

The National Institute on Alcohol Abuse and Alcoholism, created by a unanimous Act of the United States Congress (Public Law 91-616), was formally established within the National Institute of Mental Health in May 1971. Fiscal Year 1972 was the Institute's first full year of operations. It has been a year of dynamic growth and challenge. New programs for alcoholic people are rapidly being developed by all levels of government as well as private enterprise. This past year has witnessed the birth of a nationwide awareness of the problems of alcohol abuse and alcoholism, signalling the beginning of a change in basic attitudes on the part of the American population.

In FY 1972, a great deal of publicity was given to the Secretary's First Special Report to the U. S. Congress on Alcohol Abuse & Health and to its principal finding that alcohol is the most abused drug in the United States. Model state legislation, designed to treat alcoholism as an illness instead of a crime, has been promulgated and is in the process of being adopted by a growing number of States. A nationwide public educational program to reach large numbers of people, through the mass media, has been launched, and a growing amount of research concerning ethyl alcohol and its effects on the human body is being conducted. In accordance with President Nixon's Health Message, delivered to the Congress in February 1971, special efforts are underway to develop new techniques for improving the effectiveness of health care provided to alcoholic people.

As America emerges from an era of inattention and neglect of the problems of alcoholic people to an age of commitment and concern, the NIAAA is working to demonstrate the great potential for the development of effective treatment programs at State and local levels of government as well as in private industry. The National Institute on Alcohol Abuse and Alcoholism, as the focal point of the Federal effort to combat this serious health problem, is committed to stimulating an enlightened, flexible, and wide-ranging approach to prevention, treatment, and rehabilitation.



Morris E. Chafetz, M.D.
Director

National Institute on Alcohol Abuse and Alcoholism

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NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM

ANNUAL REPORT

OFFICE OF THE DIRECTOR

This is a report of actions taken, services provided, and funds expended during the first full year of operations of the National Institute on Alcohol Abuse and Alcoholism. The Institute was formally established in May 1971, a few weeks before the start of Fiscal Year 1972.

The Institute has projected two broad goals in its program efforts to reduce the toll taken by alcohol abuse and alcoholism. The immediate goal is to assist in making effective alcoholism treatment and rehabilitation services available at the community level throughout the Nation. The longer range objective is to foster the concept and practice of responsible drinking, to encourage respect and acceptance of an individual's choice not to drink, and to develop other effective methods of preventing problem drinking and alcoholism.

The scope and diversity of alcohol problems faced by the Nation were defined early in the fiscal year. The Act establishing the NIAAA required that a report be submitted containing current information on the health consequences of using alcohol. The First Special Report to the U. S. Congress on Alcohol & Health from the Secretary of Health, Education, and Welfare not only communicated the urgent need for action in the field of alcoholism but also provided guidance in developing policies and programs for prevention, control, and treatment.

The Report found that at least nine million American men and women are alcohol abusers and alcoholic persons. Alcohol contributes to half of the highway fatalities in the country, costing 28,000 lives in one recent year. Public drunkenness alone accounts for one-third of all arrests reported annually. Alcohol abuse and alcoholism drain the U. S. economy of an estimated \$15 billion a year.

Program Objectives and Achievements

As shown in Table 1, \$87,138,000 was appropriated to the NIAAA in FY 1972. These Federal resources reach States, communities, and individuals through the activities of four operating Divisions: State and Community Assistance Programs; Special Treatment and Rehabilitation Programs; Prevention; and Research. Major changes and progress have been made in each of these areas during the past year.

The State alcoholism formula grant program was activated through an appropriation of \$30 million. All 50 States, the District of Columbia, Puerto Rico, the Trust Territory of the Pacific Islands, Guam, Samoa, and the Virgin Islands are participating. The purpose of this program is to assist States in planning, operating, and evaluating projects for more effective prevention, treatment, and rehabilitation.

In the area of Community Assistance, the NIAAA was able to surpass its FY 1972 operational objective by qualifying and supporting 128 community-based treatment centers: 46 Alcoholism Treatment Service Centers, 45 Special Indian Programs, 16 Drinking Driver programs, 12 Community Assistance Demonstration Projects, six Special Public Inebriate Programs, and three special programs for clients in poverty.

Among promising new directions of the Institute, the Division of Special Treatment and Rehabilitation Programs has begun to re-examine existing policies and practices relating to treatment of employed alcoholic people. Through much of the year the Occupational Alcoholism Branch was engaged in a major educational effort to change attitudes and concepts of workers in the occupational alcoholism field concerning the identification and treatment of employees with drinking problems.

The Institute's extramural research program has expanded in two directions. In response to the President's Health Initiative Message of 1971, intensive research is being supported to improve the productivity of health care services related to alcohol abuse and alcoholism. There has also been an increasing emphasis on "psycho-social" or behavioral research to supplement the biomedical research which traditionally has been the focus of alcoholism studies.

The Institute, recognizing the need for trained persons in the field of alcoholism, has stressed the importance of training personnel with a direct relationship to ongoing service programs. While the organization of NIAAA does not include a separate training division, each of the four program divisions supports training related to its particular goals. A Special Assistant to the Director has been designated to coordinate all training programs within the Institute.

TABLE 1

NIAAA PROGRAM OBLIGATIONS

FY 1972

Research	\$ 7,495,000
Manpower Development	4,074,000
Community Programs	40,116,000
State Formula Grants	30,000,000
Public Information	749,000
Direct Operations	4,704,000
Total Obligations	\$87,138,000

Special Initiatives

In addition to its continuing commitment to help build an integrated structure of alcoholism prevention and treatment services through the States and communities, the Institute launched a number of innovative activities during the year in the area of public education and in meeting the needs of special population groups. These will be briefly described below. More detailed information about these programs appears in subsequent sections in the Report.

Public Education Campaign

In mid-year, the NIAAA started a nationwide public service educational campaign through the mass media, including television, radio, newspapers, and magazines. The primary messages of the campaign are intended to encourage responsible drinking for those who make the personal decision to drink and to properly dignify the abstainer's choice not to drink. The Institute's public information campaign has been coordinated with the drinking-driving public media program of the National Highway Traffic Safety Administration (NHTSA), Department of Transportation (DOT).

National Clearinghouse for Alcohol Information

The National Clearinghouse for Alcohol Information (NCALI) was established in FY 1972 as a central information resource for the Institute and all others interested in the subject area. The Clearinghouse is a national center for the collection and dissemination of professional, technical, and popular information on alcohol, alcohol use and misuse, and alcoholism.

Health Initiatives

The \$7 million allocated to the Institute for "Health Initiative" activities was earmarked for research projects to develop new techniques for improving productivity of alcoholism treatment and rehabilitation services. A total of 51 grants and contracts were awarded from these funds.

Program Evaluation

From its inception, the Institute has been committed to rigorous evaluation of the treatment and rehabilitation activities it supports. The purposes of early evaluation are, of course, to improve program productivity and decision making as well as to yield information about the relative effectiveness of alternative methods of treatment and rehabilitation.

The preliminary results of the evaluation system for alcoholism treatment centers, developed in cooperation with the Stanford Research Institute, indicate that some of the centers have had difficulties in providing an effective course of treatment due to patient drop-outs and lack of follow-up. Although this information is as yet limited and tentative, the Institute has already initiated changes in policies and procedures which should help eliminate many of these start-up problems.

Program Coordination

Integration of programs within the Institute and coordination of activities relating to alcohol abuse and alcoholism that are carried on by other agencies have also had continuing priority. Within the Department of Health, Education and Welfare, for example, cooperative agreements were made with the Office of Education and Rehabilitation Services Administration to use each agency's unique resources in collaboration with NIAAA. NIAAA has joined the Clearinghouse for Smoking and Health in developing alcohol education programs, utilizing special techniques developed by the Clearinghouse.

The Institute has worked closely with the Civil Service Commission and other agency and Department administrators, including the military services, in activating the Federal Employees Alcoholism Program. A ten-point interagency collaborative program was worked out in FY 1971 between the Secretary of Health, Education, and Welfare and the Secretary of Transportation. This agreement has facilitated coordination of NIAAA and NHTSA efforts in establishing the DOT community-oriented Alcohol Safety Action Projects. It has also served to coordinate the public education programs of the two agencies.

International Activities

The Institute has initiated several international research projects, ranging from the epidemiology of alcoholism to the evaluation of effectiveness of various treatment methods. The Director of the Institute also initiated discussions with the World Health Organization concerning multinational research projects which could be initiated

under their auspices. As a result of discussions with the Director of the Pan American Health Organization, a pioneering study project is now underway in Latin America.

Health Care Insurance

Recognizing that about 80% of the civilian population of the United States has some form of health care insurance, the NIAAA in FY 1972 initiated a study of the extent of alcoholism coverage in these policies. Examination of alcoholism coverage in the various forms of health insurance disclosed a wide variety of policy benefits, limitations on place of care, and often outright exclusion from policy benefits. Although improving, the health insurance coverage for alcoholism treatment does not resemble that for other diseases.

At the Annual Meeting of the AMA House of Delegates in June 1972, a resolution was adopted to the effect that insurance carriers should be urged to provide nondiscriminatory coverage for alcoholism. As a corollary to its preliminary study and in collaboration with other interested organizations and bodies, the Institute is in the process of developing a model benefit package designed to insure that alcoholism is adequately covered in all health insurance plans.

NATIONAL ADVISORY COUNCIL ON ALCOHOL ABUSE AND ALCOHOLISM

During FY 1972, the National Advisory Council on Alcohol Abuse and Alcoholism made policy recommendations to the Institute staff in several major areas. After detailed scrutiny of research proposals submitted to the NIAAA, the Council recommended that the Institute take appropriate action to stimulate the development of research in the "psycho-social" area as distinct from the "biomedical" area in which alcoholism research has been traditionally centered.

In the area of alcoholism services, the Council repeatedly expressed support for the innovative activities within the Occupational Alcoholism program. It has also expressed a strong interest in the ongoing monitoring and data collection system developed by Stanford Research Institute for evaluating the effectiveness of the Institute's comprehensive alcoholism staffing grants. The Council requested that follow-up data and evaluation summaries of these comprehensive service grants be submitted to it for informational purposes on an annual basis.

The Council has encouraged the continuing development of the Institute's relationships to other agencies within DHEW, and to other Departments outside of DHEW. In view of the close relationship between the public media campaigns of the NIAAA and the DOT, the Council recommended that an inter-agency ad hoc consulting committee be established to bring both Federal campaigns into a formalized, cooperative relationship. The Council also urged increased planning and coordination between highway safety administrators, law enforcement personnel, and the providers of health care at the State and local levels in order that alcoholic people involved in highway accidents can be identified and provided with appropriate treatment services.

The Council suggested that Institute staff also work closely with both the Department of Labor and the National Institute for Occupational Safety and Health to insure that alcoholism provisions are included in all future occupational safety and health plans.

PROGRAM DEVELOPMENT AND EVALUATION

Program Development and Planning

The Institute has projected two overall goals in its programs to reduce the toll taken from our society by alcoholism and alcohol abuse. The immediate goal is to assist in making the best alcoholism treatment and rehabilitation services available at the community level. The longer range goal is to develop effective methods of preventing alcoholism and problem drinking.

To achieve these goals the Institute develops towards the end of each fiscal year a number of specific objectives which it incorporates into the operational planning system for the forthcoming fiscal year.

The Operational Planning System (OPS) within NIAAA is the Institute's procedure for management by objectives and resource allocations. The operational objectives are the immediate steps that NIAAA must take to accomplish its long-range goals. Progress towards accomplishing these objectives is tracked on a monthly basis by the Director of NIAAA.

The following is a brief summary of the four major objectives developed for FY 1972 and the results achieved:

- (1) Develop approximately 33 new special projects to demonstrate effective and efficient methods of preventing and treating alcoholism and alcohol abuse.

In accordance with the President's Health Initiative Message of February 1971, the NIAAA was allotted \$7 million in FY 1972 to accomplish the goal of improved productivity of those health services for which the Institute is responsible. A total of 51 grants and contracts were awarded out of these funds in FY 1972.

- (2) Continue support of the 32 comprehensive community-based alcoholism treatment service centers funded through FY 1971, fifteen of which were operational in FY 1971, and increase the number of programs supported from 32 to some 120. About half of the new centers to be funded will be operational by June 30, 1972, and the majority of them will be integral components of community mental health centers.

This objective and its operating plan were amended during the year due to changes in the availability of resources. The original objective had been to increase the number of programs supported from 32 to 50. The additional \$20 million which NIAAA received for its Community Assistance Program provided funds for increasing the scope of this objective to 120 programs.

In fact, NIAAA was able to support 128 community-based treatment programs, as follows:

Community Assistance Demonstration Programs	12
Special Public Inebriate Programs	6
Special Poverty Programs	3
Drinking Driver Programs	16
Alcoholism Treatment Service Centers	46
Special Indian Programs	45

NIAAA continued support of those comprehensive community-based alcoholism treatment service centers funded in FY 1971 and, by adding new centers, expanded their number to 46. Of these 46 centers, 26 are components of Community Mental Health Centers, and 14 are closely affiliated with CMHC's. The remaining 6 alcoholism treatment centers are neither components nor affiliates of CMHC's because there are no CMHC's in the catchment area. Of the 46 centers supported by NIAAA in FY 1972, some 38 were operational on June 30, 1972. The remainder will become operational in FY 1973.

- (3) Develop a system for monitoring and evaluating the performance and effectiveness of alcoholism treatment centers.

The final report of the results of a 60-day operational test in 11 treatment centers of the evaluation system developed by the contractor (Stanford Research Institute) was submitted in June 1972. The contract has since been expanded to cover all of NIAAA's treatment centers.

- (4) Continue the support of those Indian Health Programs which relate to alcoholism.

Forty-five special Indian Programs were supported in FY 1972.

Program Evaluation

From its inception the Institute has been committed to rigorous evaluation of all treatment and rehabilitation activities it supports. The primary purpose of early program evaluation is to provide information for improved program management and informed decision-making, as well as to provide knowledge concerning the relative effectiveness of alternative alcoholism treatment and rehabilitation modalities. Evaluation data are used at the local, State and National levels in the determination of program effectiveness, resource allocations and other planning and management purposes. In this way NIAAA hopes to be able to make necessary changes early in the operations of its programs to assure efficient utilization of resources and to improve services before those persons receiving or requiring services become frustrated and disillusioned.

Community Treatment Centers

In June 1971, one month after NIAAA was formally established, a contract was awarded to Stanford Research Institute (SRI) to design, develop, and implement, on a pilot basis, an information collection and data processing system to evaluate and monitor the activities of NIAAA's Community Assistance Alcoholism Treatment Centers (ATCs). The primary objectives of the system are: (1) to determine the extent to which these centers are meeting the objectives of the NIAAA staffing grant program; and (2) to provide feedback of information to both individual treatment facilities and to NIAAA for the purpose of evaluating their effectiveness and for use in program development.

The evaluation system provides for compilation of information on such basic patient characteristics as age, sex, ethnicity, marital status, occupation, employment status, income, education, condition on admission and source of referral, etc. Among the individual facility and overall program criteria being tested are: (1) services provided, including inpatient and outpatient care by type, e.g., psychotherapy, drugs, emergency services, etc.; (2) manpower utilization, e.g., psychiatrists, other physicians, psychologists, psychiatric nurses, LPN's, LVN's, clerical and other support personnel, etc.; and (3) costs per client treated.

The system being tested also provides three indicators of treatment outcome. The first indicator provides information on the physical and social impairment suffered by the alcoholic person due to drinking and compares it to the same information at a later date. The second indicator focuses on changes in the alcoholic person's actual intake of alcohol at various stages of his treatment and rehabilitation. The third indicator measures the individual's perception of the influence of his drinking behavior and his satisfaction with the ATC's treatment. The score indicates the client's current attitude

toward the center and his expectation of progress in overcoming his problems.

NIAAA has received data on the first six months' operation of the system in the original 11 centers covered by the pilot phase of the contract. Of the first 2,400 clients coming to these 11 centers, it is encouraging to note that 22% were self-referrals. An additional 21% were referred by general hospitals, and only 13% were court and police referrals. In terms of socio-demographic characteristics, the mean age of the clients is 44 years, and 84% of them are males. Some 64% are white and 32% are black. About 40% are either divorced or separated, and 60% were unemployed at the time of their referral. In terms of income, 53% came from households having a combined household income from all sources of less than \$500 a month. Within 90 days of coming in for treatment, some 60% of these centers' clients had become abstainers.

The preliminary results also indicate that some of the centers may be experiencing difficulty in effectively implementing their programs. For example, in a limited, non-representative sample of the centers, only a small proportion of the patients treated appear to be receiving a course of treatment of sufficient duration and intensity to maximize their recovery and rehabilitation. Too many patients appear to be lost to the centers a few weeks after they have been admitted for treatment, and not enough follow-up appears to be undertaken to encourage them to return for further treatment or even to find out why they have dropped out. Hence, these centers may be in danger of perpetuating the revolving-door syndrome which has characterized the type of services provided to alcoholic people in the past. To a certain extent, this may be a reflection of growing need and demand for emergency care, shortages of staff and other resources, as well as the pressures of growing waiting lists for admission.

Although the information at the Institute's disposal is of a preliminary and limited nature, it is currently developing contingency plans to ensure that many of the problems which the centers are apparently encountering are rapidly resolved. Within the next few months, a number of changes will be made in NIAAA's policies and procedures governing the operation of these centers. When fully implemented, the revised policies and procedures will increase the effectiveness of this program and eliminate the recurrence of many of the start-up problems some of the centers appear to be encountering.

It should be noted that a number of contributions being made by the centers are difficult to quantify, e.g., an increasing community awareness of the needs of alcoholic persons, the development of a constituency in communities that can support alcoholism programs, a greater integration of alcoholism services within the total health care delivery system, and the development of more enlightened policies regarding the acceptance of alcoholic persons in community service agencies.

The pilot evaluation system has been revised on the basis of the results of its operational test in the 11 original centers, and is now being implemented and further tested in 41 of the Institute's Community Assistance Alcoholism Treatment Centers. A full report on its overall and extended evaluation operation in these centers will be made to NIAAA by the contractor in FY 1973.

American Indian Programs

Grant programs in support of the American Indian population are being evaluated through a contract awarded in June 1972 to an Indian-owned organization, Tribal American Consulting Corporation. The programs being evaluated are those designed specifically to assist the Indian population in overcoming their acute problems of alcoholism and alcohol abuse.

Employee Programs

The largest population group suffering from alcohol abuse and alcoholism consists of employed people in the Nation. The Institute is commencing a two-phase evaluation project focused on this group. The first phase will be devoted to the development of an alcoholism program profile based on the study of a cross-section of entire industries and within individual companies fostering alcoholism programs. The resultant findings on success factors of such employee programs is expected to provide significant information for application within other companies throughout the country. The second phase of this project will be to develop and provide a pilot data collection and evaluation model for the new projects sponsored by the Institute in support of the employed alcoholic people. The two phases of this project are complementary.

Public Education Campaign

An evaluation contract has been awarded to determine the effectiveness of the Public Education Campaign being conducted by the Institute. The aim of that campaign is to inform the public, through the various news media, of the alcoholism problem and of national alcoholism control, treatment, and prevention programs. "Responsible drinking" is the key idea being communicated.

Data on this campaign is being gathered and assessed in terms of public awareness of the materials, public understanding of materials, attitude changes, and effects on personal aspirations. Information gathered will be related to previously gathered baseline data concerning public attitudes and the use of alcohol within various geographic

regions as well as with those changes occurring over time as documented during the course of the evaluation project.

The methodology applied for the Public Education Campaign evaluation will include gathering data from the general public through three nationwide personal interview surveys. The data will be analyzed and periodic findings, conclusions and recommendations relative to campaign themes, messages, media use and overall campaign effectiveness will be provided to the institute. The materials and media currently being used may be changed and the campaign directed more effectively through utilization of the factual data developed.

An important aspect of the methodology includes the participation of two control cities and two cities for regulated release of materials by different media. This controlled experimentation should provide a degree of validation of the evaluation findings of the national surveys.

The concept of factually documenting all alcoholism program activities in order to monitor their effectiveness and to provide inputs for improved management will continue to be adhered to by the Institute as a primary policy.

Cooperative Inter-Agency Evaluation

The Institute emphasizes inter-agency cooperation in all aspects of program evaluation. DOT and other State Alcohol Safety Action Projects which are served by NIAAA Alcoholism programs will receive evaluation on the effectiveness of the services they provide to drinking drivers. In June 1972, NIAAA contracted for development of a pilot data collection and monitoring system which when fully developed and tested will be expanded to all alcoholism programs in support of Alcohol Safety Action Projects. The Highway Traffic Safety Administration personnel at the ASAP sites will be involved through cooperation in data collection efforts and through mutual use of evaluation information by DOT and NIAAA.

The DHEW Rehabilitation Services Administration and the Veterans Administration are also studying the NIAAA evaluation system developed for community Alcoholism Treatment Centers for application of common features in their alcoholism evaluation systems. NIAAA is cooperating with officials from these agencies in their system development in order that the systems implemented will be compatible and statistical analysis may be conducted on data from both systems.

Through participation in NIAAA sponsored projects, local and community agencies collate data for the NIAAA evaluation system and in turn receive feedback information from the system. Information relative to NIAAA evaluation efforts has been provided to all States and to DHEW regional offices. Many State officials have expressed the desire and all are being encouraged by NIAAA, to fashion their alcoholism data

collection systems on the NIAAA model in order to facilitate standardization and common data usage and to avoid costly duplication.

DIVISION OF STATE AND COMMUNITY ASSISTANCE PROGRAMS

The Division of State and Community Assistance Programs provides policy guidelines, technical and financial aid, coordination, and evaluation to help State and community organizations and facilities provide improved alcoholism treatment and rehabilitation services.

State Assistance Branch

The State alcoholism formula grant program was activated in FY 1972 through an appropriation of \$30,000,000. Authorized by the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment, and Rehabilitation Act of 1970 (Public Law 91-616), the formula grant program provides funds to States to assist them in planning, establishing, maintaining, coordinating, and evaluating projects for the development of more effective prevention, treatment, and rehabilitation programs to deal with alcohol abuse and alcoholism. Funds were allocated to the States according to a formula which is based upon relative population, financial need, and the demonstrated need for more effective prevention, treatment, and rehabilitation programs.

The Act provides that no State shall receive less than \$200,000. All 50 States, the District of Columbia, Puerto Rico, the Trust Territory of the Pacific Islands, Guam, Samoa, and the Virgin Islands are now participating in the formula grant program. The allotments of State assistance funds in FY 1972 are listed in Table 2.

As with the initiation of any new program, FY 1972 was a year of laying foundations both within the Institute and within the States. Work within the Institute centered around development of regulations and guidelines, training for Regional Office and State agency staff, consultation with Regional Office and State agency staff, and review of State plans. State efforts were devoted to the designation of single State agencies for administering the program, establishment of State advisory councils, surveying existing resources and needs, and developing the essential State plans.

The quality and scope of the State plans vary considerably from State to State, reflecting the level of alcoholism program development within each State and the experience and expertise of the designated State agencies. Those States that already have an operating alcoholism treatment and rehabilitation network will utilize a major portion of their formula grant funds for expanding direct services at the community level. The States which are in the beginning stages of alcoholism program development are devoting funds to a deeper survey of need, coordination, community organization, and program planning.

With few exceptions, the State plans still require greater in-depth development. Staff of NIAAA will provide the necessary consultation and assistance. It is expected that this new program will have considerable impact on reducing the problems of alcohol abuse and alcoholism.

TABLE 2

STATE ASSISTANCE PROGRAMS

FY 1972

	<u>Amount</u>		<u>Amount</u>
Alabama	\$ 589,488	Nebraska	\$ 205,314
Alaska	200,000	Nevada	200,000
Arizona	254,507	New Hampshire	200,000
Arkansas	330,212	New Jersey	875,219
California	2,472,403	New Mexico	200,000
Colorado	305,630	New York	2,161,096
Connecticut	362,402	North Carolina	792,901
Delaware	200,000	North Dakota	200,000
District of Columbia	200,000	Ohio	1,415,515
Florida	971,731	Oklahoma	387,949
Georgia	688,838	Oregon	288,598
Guam	15,130	Pennsylvania	1,597,184
Hawaii	200,000	Puerto Rico	504,331
Idaho	200,000	Rhode Island	200,000
Illinois	1,367,259	Samoa	4,740
Indiana	712,484	South Carolina	428,626
Iowa	396,464	South Dakota	200,000
Kansas	307,503	Tennessee	630,165
Kentucky	514,720	Texas	1,631,247
Louisiana	582,846	Trust Territory	18,933
Maine	200,000	Utah	200,000
Maryland	503,365	Vermont	200,000
Massachusetts	718,161	Virginia	667,066
Michigan	1,148,688	Virgin Islands	10,418
Minnesota	522,299	Washington	443,755
Mississippi	417,271	West Virginia	285,760
Missouri	652,873	Wisconsin	616,909
Montana	200,000	Wyoming	200,000
		TOTAL	\$30,000,000

Community Assistance Branch

Community Assistance activities are directed to the immediate goal of making improved alcoholism treatment and rehabilitation services available at the community level. Funds are made available to support community efforts to develop and conduct comprehensive health, training, and planning programs for the treatment of problem drinking and alcoholism. Such support helps cover initial salary costs of professional and technical personnel providing comprehensive alcoholism services, initiation and development of new services programs and for other specialized programs and activities.

In FY 1972, a total of 40 new community Assistance grants were approved and funded:

Comprehensive program staffing grants	14
Initiation and development	11
Direct service	10
Training	5

Total allotments for the 40 approved and funded grants amounted to \$8,855,000 for the first year.

Comprehensive Treatment Programs

Fourteen new comprehensive treatment programs were approved in FY 1972. In addition, 27 of the 32 comprehensive programs which had been funded in FY 1971 were re-funded in FY 1972 for \$7,493,540. The total funding for the 14 new and 27 continuing comprehensive staffing programs funded through Community Assistance in FY 1972 was \$11,692,000. The five remaining FY 1971 programs became operational in FY 1972 under their original funding.

When all 46 comprehensive staffing programs are fully operational they will provide treatment and rehabilitation services in areas where nearly 400,000 alcoholic people reside. Each of the comprehensive programs provides a required range of services, including inpatient, outpatient, intermediate, and emergency care, as well as consultation and education services. The programs are in a variety of community and population situations and include alternative approaches to the treatment and care of alcoholic people.

Of the 46 centers supported by NIAAA in FY 1972, 26 are components of Community Mental Health Centers, and 14 are closely affiliated with Community Mental Health Centers. The remaining six alcoholism centers serve catchment areas in which there are no CMHCs. Twenty-three of the comprehensive programs serve designated poverty areas and, therefore, receive preferential poverty funding.

Other Community Service Grants

Eleven initiation and development grants were awarded in FY 1972. These will enable 11 communities to survey their needs for alcohol treatment and prevention activities, and to develop plans on how best to meet their community situations.

The five training grants awarded provide for in-service training of professional and paraprofessional treatment staff in community facilities. The ten direct service grants are for the purpose of demonstrating various programs or methods that can be used by a community to initiate, extend, or improve its delivery system.

DIVISION OF SPECIAL TREATMENT AND REHABILITATION PROGRAMS

The NIAAA has collaborated with various Federal, State and local agencies in developing programs to reduce and prevent alcohol-related problems in special population groups. Among the collaborative programs that have been established are those providing treatment services specifically designed for drinking drivers, American Indians, chronic drunkenness offenders, low income persons, and alcoholic employees of government and industry. The total expenditure during FY 1972 for the Division was \$21,959,000.

Special Projects Branch

The Drinking Driver Program

Important among the special treatment and rehabilitation programs is a ten-point interagency collaborative program of DOT and DHEW aimed at reducing the number of deaths and injuries caused by drinking drivers. Under this agreement, NIAAA provides consultation and assistance in the development of the DOT community-oriented Alcohol Safety Action Projects (ASAP), and support for treatment and rehabilitation of problem drinking drivers identified in ASAP operations. Other areas of cooperation include coordination of NIAAA's information and education program on the use and misuse of alcohol with DOT's information campaign on drinking and driving, and sharing of research findings.

At present, 35 cities have been approved by DOT as sites for their ASAP program and 29 are operational. During Fiscal Year 1972, the NIAAA supported ten comprehensive staffing grants for \$4,076,497 and 15 demonstration projects for \$2,451,000 in these sites. One additional demonstration project for \$204,945 is located in a "mini-ASAP" site. These "mini-ASAP" sites are established by use of DOT state formula funds for communities that are located outside ASAP sites with substantial drinking driving problems.

The NIAAA special demonstration grants within the Drinking Driver program focus both on meeting the needs of problem drinkers and on the future development of comprehensive treatment and rehabilitation services for all alcoholic persons in the community. A number of special concerns and directions have emerged during the development of the Drinking Driver program. For example, an effort is being made to utilize the highway safety efforts of DOT to identify candidates for treatment early in the course of their problems with alcohol abuse. The program also seeks to change the attitudes of police, judges and probation officers toward accepting the concept of alcoholism as an illness and taking responsibility for directing the drinking driver to treatment.

The development of a cooperative working relationship between NHTSA and NIAAA and between the enforcement and health care systems within each of the ASAP community sites is a concrete example of the way in which States may implement the Uniform Alcoholism and Intoxication Treatment Act. The focus of attention becomes one of re-education, treatment and rehabilitation rather than the traditional one of imposing fines, jail sentences or other punishments.

The American Indian Program

The primary goal of the American Indian program is to develop effective alcoholism treatment and rehabilitation services for the American Indian on the community level, i.e. reservations, rural areas and large cities. Programs are supported for education and training of Indian people, and for innovative community services, with emphasis on the importance of giving Indian People the authority and resources to identify and solve their problems of alcohol abuse and alcoholism themselves. In FY 1972 a total of 45 Indian programs were funded for \$3,341,726.

To meet the unique needs of the Indian program, special guidelines and program criteria were developed. Applications are reviewed by an all-Indian Initial Review Committee which includes both reservation and non-reservation Indian men and women. These members are experienced in the field of alcoholism and represent a broad range of Indian opinions and tribal interests.

During FY 1972 negotiations were carried out for the transfer of Indian programs from the Office of Economic Opportunity to NIAAA. The transfer, effective June 30, 1972, included 37 programs from the OEO Indian branch and 10 other Indian alcohol programs. As a result, at the close of FY 1972, the Indian programs to be funded by NIAAA include 45 initiated by NIAAA and 47 transferred from OEO, for a total of 92.

The American Indian Commission of Alcohol and Drug Abuse (AICADA) of Salt Lake City is an Indian-staffed and controlled non-profit organization. Although only two years old, it is recognized as representative of Indian interests, with experience in combating the unique problems associated with alcohol abuse among American Indians. Support of AICADA was part of the transfer from OEO to NIAAA, and AICADA will continue to provide technical assistance to transferred OEO Indian alcohol projects.

In order to be fully responsive to needs associated with the American Indian alcohol problems, NIAAA also has been cooperating with DHEW Indian Health Service and other Federal agencies that are directly servicing the Indian population.

The Community Alcoholism Services Poverty Program

The Community Alcoholism Services Poverty Program was initiated as an official program of NIAAA in FY 1972. The purpose of the NIAAA program is to demonstrate how a variety of services provided by different service agencies can be made available in a coordinated fashion to the low-income alcoholic person and his family. It is intended to ensure that needy alcoholic persons will receive appropriate medical, psychotherapeutic, social, educational, and other public and voluntary services. During the past year, NIAAA staff effort was devoted to the development of a flexible program guide to provide direction for grantees and yet allow individual communities to adopt techniques that would most effectively meet their needs.

During FY 1972, DHEW and OEO conducted negotiations to transfer the administrative responsibility for 207 Alcoholism Recovery Projects from OEO to the NIAAA. Under the transfer agreement, signed on May 7, 1972, \$5,211,000 was made available to OEO for use in the Alcohol Poverty Program prior to transfer of the program on July 1, 1972. The NIAAA also agreed to fund, up to three years, those programs requiring renewal after July 1, subject to NIAAA staff review and availability of funds.

Included as part of the transfer was a contract with the National Council on Alcoholism, a private non-profit organization, through which six full-time field representatives will continue to provide technical assistance to the transferred programs. In addition, six training sites were transferred.

Since the official transfer of the 207 projects, four regional meetings have been held to open lines of communication, exchange information, and bring together grantees, State alcoholism authorities, and both NIMH and OEO Regional Office representatives.

Four new poverty program applications were submitted to NIAAA for review in June. Three of these projects, costing \$211,826, were recommended for approval.

The Public Inebriate Program

In FY 1972, the Institute initiated a grant program to demonstrate a comprehensive approach to the needs of the public inebriate. Six public inebriate programs were funded in FY 1972 for a total of \$2,539,844.

The general objective of the Public Inebriate Program is to develop comprehensive and integrated services for individuals with a chronic drunkenness problem, particularly those living in the subculture of Skid Row. The program will focus upon the common needs of the public

inebriate, namely food, clothing, shelter, medical care, alcoholism treatment services, public welfare services, and vocational assistance. Each project in this program will develop a range of services adapted to the individual's health, employment and social situations.

The effectiveness of the comprehensive approach embodied in the Public Inebriate program is expected to be shown in various ways. In addition to reducing the number of public inebriates and improving the health of those remaining on Skid Row, it is anticipated that the health care system will prove to be less costly and more effective than the criminal justice system in the care of the public inebriate. Also, it is expected that an intensive inpatient rehabilitation program will be effective for the troubled drinker who may be on the way, but has not reached Skid Row. Another objective is to show that the transitional residence can be therapeutically advantageous to those clients who wish, at least initially, to adhere to the values of Skid Row.

Other Special Population Groups

Spanish-speaking Americans, offenders within the correctional system, women, and young adults are among the population groups for whom categorical programs do not yet exist within the NIAAA. However, applications for these and other groups are encouraged within the Special Projects Branch. In FY 1972, a total of 11 applications were received from these groups, six of which were approved and funded for a total of \$640,835. Three grants were awarded to provide services to Spanish-speaking people, two for services to offenders within the correctional system, and one for services to women.

Occupational Alcoholism Branch

During FY 1972, activities of the NIAAA Occupational Alcoholism Branch were largely devoted to modifying attitudes and concepts in the occupational alcoholism field regarding the identification and treatment of alcoholic people. Empirical research has shown that close to 50 percent of employee problems are related to alcohol use, although this is not immediately apparent. Through a variety of educational and low-key promotional efforts, the Institute has been promulgating new conceptual models for occupational alcoholism programs that involve meeting the needs of all "troubled employees," and stimulating their implementation and evaluation. The NIAAA has been active in the provision of consultation to the Federal Civil Service Employees Alcoholism Program, the development of training programs for State-selected personnel, and the stimulation of research to determine answers to questions related to occupational program activity.

Federal Employees Alcoholism Program

At the end of FY 1972, most Federal agencies had issued instructions for implementing P.L. 91-616 and designated a headquarters-level program administrator to accomplish the program tasks within each agency. Through the cooperative efforts of NIAAA and the Civil Service Commission, these program administrators have participated in monthly training sessions. With NIAAA funds made available to CSC, 30 administrators have received scholarships for a three-week intensive training program, with special emphasis on program implementation in the Federal setting.

Thirty part-time consultants were selected and trained during the past year. They are now assisting both public and private sectors throughout the country with priority in the implementation of the Federal Employees Program. This consultative field force handles military as well as civilian requests from Federal agencies under the guidance of the Regional Occupational Health Representatives of the CSC.

Military Services

The Department of the Army has been preparing guidelines, with consultation from the Institute, for implementing troubled employee programs for all commands. Further, with consultation from NIAAA, the First Army has developed a training seminar for selected installation personnel. This program includes training on how NIAAA and CSC resources can be used to implement programs following the Civil Service guidelines. In addition, a demonstration effort funded by the NIAAA is underway in the Third Army area to coordinate the military identification program with both military and civilian treatment resources. The NIAAA has continued to make its regional consultants available to Army posts and installations on request.

The Department of the Navy has also received frequent consultative support from the Institute on the development of its program. Specific evaluation support has been requested and supplied.

State Occupational Staffing Program

During FY 1972, grants totaling \$2,569,589 were awarded to 48 States and two territories to initiate an occupational alcoholism program within each State to consist of two staff members, one to focus on State and local governments, and the other to focus on the private sector. These consultants will be providing uniform guidance in their consultative efforts throughout the country.

Training Effort for State Occupational Staffs

The lack of trained manpower to provide consultation to the States through the program described above necessitated a National training effort for State personnel. The training effort is an ongoing 18-month program using Occupational Regional Consultants as problem solvers and trouble shooters. At the conclusion of training, it is expected that 115 top-level occupational consultants with quality expertise will be prepared to help raise the sights of each State program.

Demonstration Projects

The exact nature of an effective industrially-oriented treatment resource is still open to question. In FY 1972, ten grants totaling \$1,773,963 were awarded to stimulate a variety of sponsors to establish such resources. A variety of behavioral, care-giving facilities to meet industrial needs have been set up across the country analogous to those physical health resources already available to most industrial organizations. A research evaluation contract with Stanford Research Institute provides for the overall evaluation and comparative analysis of these programs.

Research Efforts

During FY 1972, the NIAAA stimulated a series of research efforts designed to answer specific questions related to industrial alcoholism programs and to provide more effective application of program concepts and directions. These projects include analyses of: (1) the roles of middle management in the development of social action programs within private industry and the Federal Government; (2) the role and impact on State alcoholism programs of the occupational alcoholism program consultants; (3) the linkage between identification of alcoholic persons and treatment in a variety of industrial program settings to determine those factors that tend to inhibit the smoothness of such linkage; and (4) the dynamics of Alcoholics Anonymous to allow translation of these dynamics into terms that are understandable to the professional.

The Branch has also stimulated the creation of a new professional organization called the "Association of Labor-Management Administrators and Consultants on Alcoholism". This organization will develop personnel qualifications and standards for this new occupation as well as keep in communication with all of the important practitioners in the field, both Governmental and private, for the mutual benefit of all interested parties and agencies.

DIVISION OF PREVENTION

Although the Division of Prevention had not been formally activated in FY 1972, a number of prevention programs were conducted by the Institute during the past year. An inventory has been made of preventive projects currently designated to other programs throughout the NIAAA and, where appropriate, these will be placed under the responsibility of the new Division. The Division of Prevention will be comprised of the Community Prevention Branch and the Youth Education Branch.

Community Prevention

A major effort has been undertaken to involve a broader cross-section of American citizens in voluntary efforts to overcome the growing problem of alcohol abuse and alcoholism. For example, the NIAAA and the United States Junior Chamber of Commerce with its 500,000 Jaycees have joined in a Nationwide campaign to provide information to local communities on the preventive aspects of alcohol abuse. In addition to the community endeavor, the Jaycees are providing educational information to school districts and other youth organizations.

The National Congress of Parents and Teachers is currently working with NIAAA to provide parents of school-age children with educational information on alcohol abuse and alcoholism. Another program currently underway is a special project developed with the Chemawa Indian School Advisory Board. Consultation is being provided by the Bureau of Indian Affairs, Department of Interior, and the DHEW Indian Health Service.

Activities within the Division will be carried out in close working relationship with the National Clearinghouse for Alcohol Information (which is discussed later in the Report) for the purpose of monitoring and indexing prevention information that can be made available to states, regions and other interested agencies. The Institute has also joined the National Smoking and Health Clearinghouse in the utilization of a community laboratory project for the purpose of developing educational techniques which are applicable to the prevention of both smoking and alcohol abuse.

Youth Education

The NIAAA is working with the DHEW Office of Education in the development of visual aids and print material on alcohol education that will meet the needs of students, Grades Kindergarten through 12, across the Nation. The Institute is also working with the Office of Alcohol Countermeasures, DOT, to develop a curriculum guide for alcohol education as it relates to traffic safety for public school usage.

The NIAAA and the Seattle Public Schools, Seattle, Washington, have entered into a collaborative project for students, Grades 4 to 7. In addition to intensive teacher training in alcohol abuse and alcoholism, a curriculum for students has been developed by the School District. There is also wide participation by parents of the children.

In FY 1972 an instrument was developed for surveying teenage drinking attitudes and behavior. The national survey, which is to be carried out in FY 1973 and FY 1974, should be a major contribution toward designing more effective programs of education and prevention for young people.

Several research studies, funded through the Extramural Research Branch, are being conducted in the area of youth and prevention. One study attempts to clarify the relative contributions of heredity and environment to the development of alcoholism by studying adopted children whose biological parents were alcoholic. Another study holds the potential for adding much needed information regarding the relative effectiveness of various preventive educational programs with adolescents.

DIVISION OF RESEARCH

Extramural Research Branch

The primary goal of the Extramural Research Branch is to foster the development of effective methods of preventing and treating alcoholism and alcohol abuse. To achieve this objective, the Branch supports a broad program of research on etiology, diagnosis, treatment, and prevention of alcoholism.

Since alcoholism is the product of a complex interaction of biological, psychological, and social factors, hope for developing a better understanding of its causes, natural history, and treatment lies in a wide range of research in all relevant disciplines. The NIAAA encourages and supports basic and applied investigations in universities, medical schools, and other institutions. Projects are supported to develop and evaluate new techniques, approaches, and methods for the treatment and prevention of alcoholism and the rehabilitation of alcoholic persons and problem drinkers.

During FY 1972, the Extramural Research Branch approved 91 research projects covering a wide range of problems associated with the use and abuse of alcohol. Of these, 76 were funded in FY 1972, while 15 were deferred for possible future funding. As shown in Table 3, at the close of FY 1972, the NIAAA's extramural research grants program included 120 new and continuing grants totaling \$7,495,000.

TABLE 3

EXTRAMURAL RESEARCH GRANTS

FY 1972

<u>Program Area</u>	<u>Number of Grants</u>	<u>Amount of Funds</u>
Centers	3	\$ 970,000
Biological Research	61	3,067,000
Behavioral Research	27	1,354,000
Clinical Research	22	1,206,000
Prevention & Education	3	637,000
Community Research	2	41,000
Surveys	<u>2</u>	<u>220,000</u>
TOTAL	120	\$7,495,000

The following provides more detailed information on some of the grants awarded in the various program areas.

Research Grants

1. Grants for University-based Centers

During FY 1972, funding was continued for three grants awarded to university medical schools for the support of multidisciplinary research centers. This program was established for the purpose of conducting research from a variety of perspectives, including psychiatry, psychology, biochemistry and physiology. In addition to recruiting scientists into alcoholism research, each center maintains an active program for research training. The training program has attracted highly qualified young scientists to work on alcohol problems, and it is gratifying to note that one of these trainees received the American Psychiatric Association's Hofheimer Prize for Research. This research was also supported by funds from NIAAA. The research suggests that genetic factors seem to be more relevant than environmental factors, even in instances where a half-sibling was raised by nonalcoholic substitute parents from early infancy. Though these findings are based on well-designed research, further work is required to reach more definitive conclusions.

2. Biomedical Studies

The greatest emphasis in alcoholism research has been on the biological aspects of alcohol effects. There is a continuing interest in mechanisms concerned with the metabolism of alcohol, the etiology of liver cirrhosis and other alcohol-related diseases, and the study of the withdrawal syndrome and its treatment. In one study, a number of chemical substances are being investigated regarding their capacity to activate the enzyme mainly responsible for the metabolism of alcohol. The development of such a substance would enhance the efficiency of the enzyme and thereby accelerate the degradation of alcohol in the body. Recent findings in this study indicate that several compounds increased 20-fold the activity of the enzyme.

Another line of research relates to the formation of neurochemical substances which may be associated with alcohol addiction. Earlier research suggested that addiction to alcohol and to morphine may have a common basis; however, subsequent studies have not corroborated these findings and have challenged the earlier conclusions. Several research projects are addressed to this crucial problem which, if fully elucidated, would be invaluable in developing a medical approach to the treatment and prevention of alcoholism.

One clinical study incorporating an extensive medical screening of alcoholic patients uncovered a significant incidence of abnormalities of the mechanisms regulating carbohydrate metabolism. The research will continue in order to establish the clinical utility of these findings in the therapeutic and prophylactic management of abstinent alcoholic subjects.

3. Treatment Studies

In FY 1972, the research grant program increased its emphasis on studies on psychological and social treatment methods for alcoholism. These projects are designed to develop and assess the efficacy of new treatment modalities.

Three projects in this area are focused on the alcoholic person in the context of his family. One project is studying how family systems use and abuse alcohol and evaluating changes in families participating in a novel family-oriented treatment program. Another project is investigating verbal and nonverbal communication patterns between the alcoholic person and members of his family. In families with an alcoholic member, alcohol may serve a unique function unlike that in the majority of families without an alcoholic member. By employing new techniques for recording and analyzing social interaction, it is hoped that these projects will yield insight into the role alcohol plays in the family unit. A third project is studying the methods families use in coping with alcoholism and their utilization of community resources such as Alcoholics Anonymous and church organizations.

Recently concluded projects or those soon to be completed may have far-reaching implications for health care and treatment procedures. A complex study of therapeutic effectiveness of several treatment methods will be concluding next year. Preliminary examination of the limited data on readmission rates suggests that some alcoholic patients receiving detoxification services are returning to the hospital at a greater frequency than patients in other experimental groups. In addition, the research team developed the impression that implosive therapy may be less successful with some patients than other forms of individual treatment and that for some patients, intensive aftercare is not more effective than standard aftercare. Readmission is a crude indicator of treatment outcome, and the suggested findings remain to be confirmed by more differentiating data based on such variables as social, financial, legal, employment, and drinking outcome measures.

A monograph will be published reporting the results of a project evaluating the impact of an alcoholism information and referral service in a large city. The data indicate that providing more services of an individualized nature, such as establishing appointments for treatment with a follow-up, results in more persons being reached for treatment. On the other hand, persons with few problems or

problems of minor dimension tend not to follow through after referral. These findings suggest that those persons who could be helped the most because they may have fewer alcohol-related problems are not being recruited into the treatment process and that the referral services should pay more attention to these clients.

Studies concerning differentiation among subtypes of alcoholic persons continue to be funded by the Institute. These projects are still in the data collection stage. It is expected that as subtypes are identified and specific treatments are devised which are maximally effective for each group, a higher treatment success ratio can be achieved.

4. Highway Safety

During the past fiscal year, five new projects related to the problem of alcohol and driving have been added to the two previously funded. This is an area of urgent need for study because of the seriousness of the consequences of driving while under the influence of alcohol. The projects are concerned with the effects of alcohol on driving skills and performance; the assessment of tests for alcohol-produced behavioral impairment; and the relationship between social-psychological attributes and driving behavior of youthful drivers. One study of special interest is a two-year evaluation of the impact of recently passed legislation in one state which automatically will impose a jail sentence of 48 hours and driver's license revocation of up to six months for a first offender convicted of drunken driving. The results from this study will clarify whether such legislative sanctions are effective and, if so, why.

Annual Alcoholism Conference

The Second Annual Alcoholism Conference was held in Washington, D.C., on June 1-2, 1972, at the Washington Hilton Hotel. The first day's session included panels on Adolescent Drinking and Problem Behavior and on Alcohol and Human Motivation. The second day's session included panels on Interpersonal and Social Contexts; Criteria in Treatment Evaluation; and the Treatment Process. Two invited guest lectures were delivered; one by Professor Dr. Vladimir Hudolin, Institute for the Study and Control of Alcoholism, Zagreb, Yugoslavia, and the other by Dr. Griffith Edwards, Institute of Psychiatry, Maudsley Hospital, London, England. Dr. Hudolin's lecture was entitled "Alcoholism in the Socialist Republic of Croatia and Treatment of Alcoholic Patients." Dr. Edwards' lecture was entitled "A Community Case Study: Alcoholism Treatment in Antiquity and Utopia."

The Alcoholism Conference was clearly a success, as evidenced by registration of about 700 individuals which is nearly three times as many as had registered for the Conference of the prior year. An evaluation questionnaire was mailed to the registrants of the Conference to aid in planning future Conferences.

Research Workshop

The first research workshop addressed the problem of the alcoholic blackout. Participants included scientists from several disciplines relating to memory phenomena. Discussions centered on such topics as factors influencing onset and offset of blackouts, memory consolidation and altered states of consciousness, and methods and techniques for determining the blackout state. The discussions resulted in some recommendations for future research to elucidate the phenomenon, and it is hoped that another product of the effort would be the recruitment of researchers into alcoholism research.

Two future workshops are currently being planned. One will explore alcoholism in the context of the family, and the other will focus on methods for rapidly eliminating alcohol from the body.

Collaborative Research

In addition to the above-mentioned activities, staff of the Extramural Research Branch conduct collaborative studies with non-Institute researchers. Four projects have been or are now being completed. These studies include a project on devising a personality inventory scale for differentiating alcoholic from psychiatric patients. Another study of personality showed that there may be a significant difference between alcoholic patients and heroin addict patients in psychiatric facilities. A third study suggested that a National driver register of convicted drunken drivers may serve usefully as a means of casefinding of alcoholic persons. A study now in progress will evaluate data collected on fatal vehicular accidents.

Laboratory of Alcohol Research

Structure and Objectives

The Laboratory of Alcohol Research at the St. Elizabeth's Hospital, Washington, D.C., is the intramural research component of the Institute. The primary focus of the Laboratory is an interdisciplinary analysis of the biological and behavioral parallels of alcoholism in man and animals, and the development of new approaches to these fundamental questions.

In the area of clinical and applied research, the examination of factors which influence the reinitiation and persistence of drinking and the study of concomitant metabolic changes during intoxication

and withdrawal have long been a primary focus of the Laboratory's concern. Moreover, during the past four years, studies from the Laboratory of Alcohol Research on the effects of alcohol on adrenal function in alcoholics have laid the basis for the application of pharmacological blocking agents (i.e., the Beta adrenergic blockers) which may be significant in the treatment of alcoholism.

The clinical program of the Laboratory is now preparing a major re-orientation of its research. It is planning to study alcohol problems in the context of married couples and the development of treatment methods suitable for treating families with an alcohol problem.

A second major concern of the NIAAA has been enhancement of interdisciplinary training of biomedical scientists for work in the field of alcoholism. Since its inception, the Laboratory has maintained a Visiting Scientist Program and has attracted investigators both from the USA and other countries for one- to three-year periods of research training and collaboration with senior investigators on the Laboratory of Alcohol Research staff.

Summary of Research Progress

A summary description of some of the major research findings during FY 1972 is presented below. These studies do not represent the total research output of the Laboratory of Alcohol Research, but highlight some recent progress in understanding the behavioral and biological aspects of alcoholism.

1. Early Detection of "High Risk" Factors in Alcoholic Cirrhosis

Cirrhosis of the liver is estimated to be one of the leading causes of death in alcohol addicts. Recent findings suggest that the high-risk factor for liver disease in alcohol addicts may be genetically determined. In clinical studies, it was found that those men who develop striking lipid abnormalities during experimentally induced alcohol intoxication are persons with a familial type of hypertriglyceridemia associated with hyper pre-beta lipoproteinemia. In contrast, those individuals who show no lipoprotein abnormality during sobriety have relatively small alcohol-induced lipid abnormalities during chronic alcohol ingestion.

2. Alcohol Induction of Methanol Accumulation in Blood and Urine

The accumulation of methanol, an alcohol with poisonous metabolites, has been detected in the blood and urine of alcohol addicts during 10- to 15-day periods of chronic drinking by the use of gas chromatographic

techniques. Blood methanol levels increased progressively as a function of days of heavy drinking rather than as a monotonic function of alcohol dosage. There were no significant differences in methanol accumulation between subjects drinking bourbon and subjects drinking methanol-free grain alcohol. Upon termination of drinking, the time course of blood methanol disappearance lagged behind the linear disappearance of ethanol by six to eight hours. Complete elimination of trace amounts of blood methanol required about two days.

3. Caloric Content of Alcohol

Alcoholic persons tend to eat poorly while they are drinking, and malnutrition is a common medical complication of alcoholism. It has often been suggested that this poor dietary intake reflects the fact that fewer calories from food are required because of the high caloric yield from alcohol. However, recent data suggest that calories derived from alcohol are not equivalent to those derived from food.

The combined daily caloric intake from food and from alcohol for four alcoholic subjects in a clinical research ward averaged between 4000 and 5000 calories over a two-month period. However, no subject gained weight and one subject lost weight during this period. Therefore, it appears that, even when caloric intake from food is optimal, the excess calories derived from alcohol cannot be utilized in the same manner as those derived from nonalcoholic foods.

4. Simultaneous Comparison of Arterial and Venous Blood Alcohol Levels

The development of improved methods for precise and rapid determination of degree of intoxication following alcohol consumption requires acquisition of certain basic data concerning the comparability of blood alcohol assessments based on arterial and venous samples. It was found that arterial blood samples consistently showed a higher blood alcohol concentration than venous samples within the first hour following alcohol ingestion.

The extent of this difference tended to decrease through time. Breathalyzer values were consistently lower than either arterial or venous blood alcohol determinations. This arterial-venous difference may be due to the fact that until tissues are alcohol saturated, there is diffusion from arteries into tissues which produces a lower level of alcohol in returning venous blood. Once the blood alcohol concentration in tissue is equivalent to arterial concentrations, this diffusion process stops.

5. Alcohol, Androgens and Aggression

Alcohol abuse has long been associated with the facilitation of aggression, expressed most visibly as assaultive behavior and drunken driving. Within the past year, it has also been observed that sober alcohol addicts in a correctional institution have significantly higher testosterone levels than control subjects of comparable age. Recent technological advances in radioimmune assays of testosterone now permit precise examination of serum testosterone levels.

Research is in progress to study the effect of chronic alcohol intoxication on testosterone levels of alcohol addicts on a clinical research ward. Some preliminary data suggest that it is not the absolute level of testosterone but rather the degree of dynamic change in levels which may correlate with alternations in aggressivity and dysphoria during alcohol intoxication.

6. The Effects of Alcohol on Short-Term Memory Function

One of the most puzzling phenomena associated with alcohol intoxication is the "blackout," a transient global memory loss. Recently it has been suggested that the alcoholic "blackout" may result from a direct disruption of "short-term" memory function by alcohol. In order to test this hypothesis, the effect of alcohol on "short-term memory" function in alcohol addicts was examined.

It was found that alcoholic patients with a clinical history of blackouts did not differ from control subjects in the accuracy of delayed matching-to-sample performance, even at very high blood alcohol levels. Seven of the 13 blackout subjects actually improved their performance accuracy during chronic intoxication. Previous studies have shown impairment of short-term memory with a clinical history of blackouts. The discrepancy between these data probably reflects the fact that the subjects were highly motivated to perform accurately to earn alcohol, whereas other types of rewards such as cigarettes do not motivate accuracy if alcohol is freely available.

7. The Influence of Social Factors and Work Schedules on Drinking Patterns in Alcoholic Persons

Clinical observations of the social interactions between alcoholic brothers and between alcoholic fathers and sons illustrate the ways alcohol consumption can influence role definition and vice versa. It appeared that alcohol often served to precipitate a reversal of relative dominance roles during sobriety and also to allow each member of the pair to play a variety of roles as a function of fluctuations in his state of intoxication relative to his partner.

A second behavioral factor which has been found to influence drinking patterns is the schedule of work required to obtain alcohol. When subjects were required to earn their alcohol by working at a simple button-pressing task, there was an alternation between abstinent periods of working (1 to 3 days) and drinking (3 to 6 days) over two months. The dissociation between earning and spending seemed to reflect a lowered motivation to work at anything during drinking rather than an inability to perform the simple task. Moreover, since subjects often showed withdrawal signs and symptoms during abstinent working periods, these data raise a question about the relationship of withdrawal to the perpetuation of drinking.

These data suggest that drinking patterns should be amenable to schedule control in token economy approaches to therapy. It may be possible to manipulate alcohol intake by arranging conditions in which drinking is compatible with a variety of alternative behaviors.

8. The Development of Animal Models of Alcohol Addiction

The limitations on experiments that can be performed on human subjects have necessarily restricted progress in examining the central nervous system (CNS) mechanisms involved in the phenomena of alcohol addiction. The importance of alterations in alcoholism has been illustrated by behavioral tolerance for alcohol which cannot be explained by metabolic factors as well as by the CNS hyperexcitability upon cessation of drinking which defines the withdrawal syndrome. In view of the importance of developing an animal model of alcohol addiction, research is in progress examining a number of techniques designed to produce physical dependence upon alcohol in rodents and in monkeys.

Publications and Activities

During FY 1972, staff of the Laboratory of Alcohol Research have published 25 papers in scientific journals. These research papers cover a variety of topics ranging from the effects of alcohol on emotions, memory, sleep and social interactions to the study of alcohol effects on blood methanol accumulation, adrenal and liver function, as well as alcohol addiction. (Some highlights of these studies were summarized under the section above.) The staff have also published one book, Recent Advances in Studies of Alcoholism (HSM 71-9045), which summarizes the status of alcohol research.

Intra-Governmental and University Collaboration

During the past year, the Laboratory has developed collaborative research projects with the NIMH Laboratory of Preclinical Pharmacology

and the Laboratory of Clinical Science. In addition, the Laboratory of Alcohol Research is continuing its collaboration with the NIH National Institute of Arthritis, Metabolism, and Digestive Diseases; the Department of Psychiatry, Harvard Medical School; and the Texas Research Institute of Sciences in Houston.

TRAINING

The problems faced by alcoholic people are products of the interaction of economic, social, cultural, psychological and biological factors. Solution of the problems demands the understanding and skills of many professional disciplines and the participation of countless citizen groups and their leaders.

While recognizing the need for broadly trained individuals, the Institute believes that simply increasing personnel without a direct relationship to the ongoing service programs would be of little help in solving the alcohol abuse problem. The organization of NIAAA therefore does not include a separate training division. Each of the four Program Divisions supports training activities related to its respective goals. A Special Assistant to the Director has been assigned to coordinate all training programs within the Institute.

At the close of FY 1972, the Institute's total expenditure for manpower development was \$4,074,000. Its direct training grant program included 48 training grants for a total expenditure of \$3,926,000. Table 4 shows the number of training programs for professional and nonprofessional personnel supported in FY 1972 and the amount of funds awarded for each type of program.

TABLE 4

TRAINING GRANTS PROGRAM

FY 1972

<u>Type of Training</u>	<u>Number of Grants</u>	<u>Amount of Funds</u>	<u>Average Amount per Grant</u>
Professional	35	\$2,668,462	\$ 76,241
Nonprofessional	9	1,035,608	115,068
Professional and Nonprofessional	4	221,930	55,482
<u>Sub Total</u>	48	\$3,926,000	\$ 81,791
Fellowships & Career Teaching Awards	7	147,506	21,072
 TOTAL	55	\$4,073,506	\$ 74,063

Direct Service Personnel

Of primary concern is the availability of trained persons to provide direct services to alcoholic people in line with the Institute's areas of priority. One project has developed teaching techniques and materials to prepare nonprofessionals to work with alcoholic patients. Building upon the knowledge gained in this program, the Institute has stimulated the development of a training program to prepare personnel to work in community agencies, the public inebriate program, and the alcohol safety action program. This new program includes didactic training at a central site and supervised field training at the student's own place of employment. If the new program proves successful, the model can be duplicated in many parts of the country.

The Institute's training programs are adapted to the purpose and composition of the trainee group and the local resources available to accomplish the training. New awards have been made this year to community agencies, medical schools, voluntary organizations and a State alcoholism authority to train paraprofessionals in the techniques and skills of assisting the alcoholic person. These programs are directed towards educating new personnel in the field of alcoholism as well as increasing the skills of individuals already committed and providing services. Many of these programs train recovered alcoholic people, who, because of their personal experiences, have a perspective on the problems of alcoholism which can complement the efforts of individuals just entering the field of alcoholism.

Improved Referral Resources

The Institute's training efforts are directed not only towards those who work primarily with alcoholic people but towards a broad range of individuals whose professional activities bring them into contact with alcoholic people. Included are therapists, nurses, social workers, physicians, clergy, etc. Besides understanding the problems of the alcoholic individual, these professionals can initiate and facilitate the recovery process if they are aware of the resources available to alcoholic people in their own communities. The Institute has funded a new grant to provide short-term training to these professionals so that they may gain more knowledge about the agencies in their own communities and, thereby, make meaningful referrals for the alcoholic person who is seeking assistance.

Fellowships and Career Training Awards

A significant hindrance to the programming activities of the Institute has been the lack of individuals to take leadership roles in institutions providing training and in-service programs themselves.

New programs are being developed and ongoing programs are receiving increased support to provide this kind of needed personnel. As part of this effort, the Institute has entered into a cooperative venture with the Division of Narcotic Addiction and Drug Abuse, NIMH, to train at least one person in each medical school in the country to take the leadership role in the area of total addiction. This program is concerned not only with the training of that individual but has as its goal the implementation of an addiction training program for medical students, physicians and allied health personnel. While the implementation of the total package will take time, there are still immediate needs for such personnel, and the Institute has awarded a new grant to reach practicing physicians through a continuing education program. New awards have also been made to graduate schools and medical schools to train professionals who will function not only as teachers in the new training programs, but will also provide consultation and direct services to alcoholic people.

The Institute has stated its intentions to increase the quantity and quality of clinical and behavioral research in treatment and prevention. Therefore, training programs have been stimulated to develop the researchers capable of performing such research. Three new training grant awards were made during FY 1972 in support of this effort, and increased support was provided to the Research Scientist Development Award program.

Leadership Commitment

The success of alcoholism treatment and prevention programs does not depend solely upon a pool of well-trained individuals to provide the services, but requires also the active participation of community leaders who personally must be aware of the magnitude of the problem and the options available to them for development of programs within their own States and communities. A new award grant has been made to foster such involvement by individuals who may be "gatekeepers" within their States by bringing training programs to them tailored to their specific needs. This program, which will be operating in several States, has the goal of helping key agency and community leaders to ascertain problems in their own areas and to effectively plan and implement programs at the State and community levels.

The Institute's recognition of the importance of training in the development of effective alcoholism service and prevention programs led to the establishment of the Alcohol Training Review Committee during FY 1972. The Committee is comprised of consultants experienced in development of manpower in this area.

PUBLIC AFFAIRS

If the problems of alcohol abuse and alcoholism are to be reduced, the Nation must be made aware of the facts and problems of alcohol use and misuse. The NIAAA is committed to the development and activation of a National education and information program to communicate facts about the effects of alcohol and its dangers in an endeavor to change those public attitudes and behavioral practices which lead to alcohol abuse and alcoholism. This overall mission was given new urgency during the past year with the release of the findings of the First Special Report to The U. S. Congress on Alcohol & Health from the Secretary of Health, Education, and Welfare.

Highlights

Several significant milestones have been reached in the Institute's ongoing public affairs effort. In February, the press conference announcing the Alcohol & Health report was held. The event attracted nationwide publicity, including spots on all three National television networks, and front-page stories in almost all of the country's major daily newspapers.

At the same press conference, the Director of NIAAA, Dr. Morris E. Chafetz, announced the launching of a nationwide public service educational campaign through the mass media, including radio, television, newspapers, and magazines. The primary thrust of the campaign has been to urge responsible drinking for those who make the personal, private decision to drink alcoholic beverages. Response to the campaign effort has thus far been very strong, with penetration into all 50 States and the District of Columbia, as well as many foreign countries.

The third highlight of 1972 was the establishment of the National Clearinghouse for Alcohol Information (NCALI). The Clearinghouse will serve as the National focal point for the collection and dissemination of professional, technical, and public information and data on alcohol, alcohol use and abuse, and alcoholism. Among its many activities will be the acquisition and processing of various materials on alcohol and related topics; establishment of a materials repository and library; compilation and indexing of a source availability list; production of a guide to selected technical documents; utilization of automated data processing systems; replying to public inquiries and requests; distribution of documents; publishing an NCALI bulletin and a quarterly newsletter; and preparation of directories of Federally supported alcoholism programs.

Basic Activities

The activities of the Institute in the area of public affairs are functionally divided into three basic areas: Information Services, Editorial Services, and the above-mentioned Clearinghouse.

The Information Services Section is concerned with the production of a broad range of public affairs materials, including audio-visuals, graphics, films, publications, and exhibits. The Section is particularly involved with the preparation of publications in order to better respond to the increased public interest generated by the mass media education campaign on alcohol abuse and alcoholism. Since January 1972, the Institute has supervised the publishing of four major works (including the Alcohol & Health report), three booklet reprints, and numerous smaller publications. Three significant booklets which are currently in press are designed to serve as primary resources in responding to the large majority of public inquiries. They are Alcohol and Alcoholism, Alcoholism and its Treatment, and a Bibliography on Treatment and Rehabilitation. Other publications in preparation at this time include a film catalog, conference and seminar proceedings, and a directory of treatment facilities.

The Information Services Section also coordinates public and media appearances by the Institute Director and staff, along with providing any supportive exhibits, printed or written materials, and information. The growing Federal alcoholism effort has necessitated frequent appearances by Institute representatives at conventions, association meetings, television and radio shows, and speaking engagements.

The Editorial Services Section provides support to the Office of the Director and Institute staff in the preparation of speeches, articles, press releases, fact sheets, and other written statements, papers, and materials. The promulgation of Institute policies, activities, and information is intimately tied to the overall effort and goals of the NIAAA. In order to successfully mount a National attack on the problems of alcohol abuse and alcoholism, the Institute Director and his staff, since January 1972, have discussed Institute policies, programs, and objectives at meetings and speaking appearances in almost two dozen States, several foreign countries, and on nationwide television.

Operation of the National Clearinghouse for Alcohol Information, described in the previous section, has recently been started with technical services supplied by the General Electric Company under NIAAA contract. Due to the expanding nature of the Federal alcoholism effort and recognition of alcoholism as America's largest "hidden" health problem, the Clearinghouse will play an important role in helping to fulfill the goals and objectives of the NIAAA.

HEALTH INITIATIVE PROGRAM

The President's Health Initiative Message of February 1971 directed DHEW to focus research in the field of health care services on new techniques of improving the productivity of our medical system, and in so doing, to establish pilot experimental and demonstration projects, disseminate the results, and encourage the health industry and medical professions to bring these techniques into full and effective use.

In FY 1972, \$7 million was earmarked by NIAAA to accomplish this goal. A total of 51 grants and contracts were awarded using these funds.

The following is the breakdown, by area, of the projects initiated:

- (a) Eleven surveys to assess existing resources and additional needs;
- (b) Fifteen projects to develop and evaluate innovative, preventive, and treatment modalities, some of which may later be applied on a broad scale;
- (c) Twelve demonstration projects to employ innovative techniques of service delivery for alcoholic people, incorporating adequate evaluation measures; and
- (d) Thirteen projects to study concepts related to the development of innovative treatment modalities.

Because these projects are in priority areas of the Institute, they will be closely followed in order to bring forward research results as soon as they become available.

ALCOHOL AND HEALTH REPORT

During FY 1972 the NIAAA staff and consultant Task Force, chaired by Director of the Institute, prepared the Secretary's First Special Report to the U. S. Congress on Alcohol & Health. That Report represents the first phase of a three-year comprehensive study by NIAAA of the health consequences of using alcoholic beverages in its efforts to assist the Nation in combating alcohol-related problems.

As of June 30, 1972, some 12,000 requests for that publication had been received by the Institute, indicating that the Report is in great demand by the general public and those individuals, agencies, institutions, and organizations working in this field. The Findings set forth in that Report present important facts concerning the use and abuse of alcohol. Some of these are:

- Alcohol is the most abused drug in the United States and problems related thereto have increased, reaching major proportions. An estimated 7 percent of the adult population in the United States manifest the behaviors of alcohol abuse and alcoholism. Among the more than 95 million drinkers in the Nation, about 9 million men and women are alcohol abusers and alcoholic individuals.
- Alcohol plays a major role in half of the highway fatalities in this country, costing 28,000 lives in one recent year.
- Alcohol abuse and alcoholism drain the U. S. economy of an estimated \$15 billion a year.
- Public intoxication accounts for one-third of all arrests reported annually.
- Alcoholism among American Indians is at an epidemic level.
- Alcoholism is not a crime. It is an illness and is treatable as such. To date, the criminal justice approach to alcoholism has not been effective. (In this respect the Report also contained a major speech given by John N. Mitchell when he was Attorney General of the United States, entitled "Alcoholism--to Heal, and Not to Punish", in which he points out the folly of treating alcoholism as a legal problem.)
- The causal factors of alcoholism and alcohol abuse have not yet been established. Social, psychological, physiological, and cultural factors all play critical roles.
- Programs dealing with alcoholism and alcohol abuse have been accorded low priority while treatment services and facilities have been fragmented, failing to take into account changing life styles or unique characteristics of alcoholic individuals of various population groups.

- Alcohol abuse and alcoholism, while recognized as a major health problem in most developed and many developing nations, have received little multinational cooperation in combating the problem.
- All public and private general hospitals need to implement the position of the American Medical Association and the American Hospital Association that no patient should be excluded from hospital care because his illness is identified as alcoholism.
- Adoption of uniform legislation by each State providing for appropriate treatment and rehabilitation services for alcoholic persons is critically needed, as is the implementation of such legislation through necessary funding and dedication of health, welfare, and rehabilitation resources.
- Research into causal factors of alcoholism, associated diseases, early diagnosis and treatment, etc., is needed.

The First Special Report on Alcohol & Health primarily represents an extensive survey of existing knowledge. As such, it pointed out a number of crucial areas which need further clarification and elucidation. In FY 1972, work was begun on implementing subsequent phases of research which will define and test methodologies for assessing precisely and completely the ways alcohol affects selected areas of well-being, as well as identifying the most feasible methods for mounting effective prevention and treatment programs in the field of alcohol abuse and alcoholism. Where appropriate, the Institute is awarding, on a competitive basis, a number of applied research contracts to further clarify the Findings of the First Report. Other studies are also being undertaken using grant mechanisms.

PROGRAM COORDINATION

The Institute has undertaken a number of specific activities during the year aimed at program coordination. It has focused on creating a solid framework for the integration of related programs and for the coordination of all program efforts. Emphasis has been placed on facilitating program planning and evaluation.

Collaboration With Other Agencies

Agreements were developed during the year to gain the cooperation and involvement of a number of agencies whose resources are needed by alcoholic people. These agreements provide for the utilization of each agency's resources in collaboration with NIAAA. The Institute devoted \$2,138,892 in FY 1972 towards developing such projects both within DHEW and with other Federal Departments. A number of these activities have been described in earlier sections of this Report.

NIAAA is working with the Office of Education on a collaborative project for the development and testing of teaching materials and techniques for developing a lifestyle of responsible behavior for young people, particularly with respect to the nonuse or responsible use of alcoholic beverages.

Coordinated efforts are being made by NIAAA and the Rehabilitation Services Administration in the major area of vocational rehabilitation. Counseling in this area is a significant element of comprehensive rehabilitation program, and the network of vocational rehabilitation resources spread throughout the country should be used to provide services adapted to alcoholic people.

The Institute and the Clearinghouse for Smoking and Health are providing collaborative funding to include alcohol education programs, utilizing special techniques developed by the Clearinghouse.

INTERNATIONAL ACTIVITIES

In FY 1972 NIAAA initiated a number of international research projects, ranging from cross-cultural studies of drinking practices and epidemiological investigations to the evaluations of the effectiveness of different treatment modalities and delivery systems for alcoholism services. The Director of NIAAA made two visits to Europe to personally stimulate the development of international research projects. He also visited the World Health Organization in Geneva to discuss ways to develop multinational research projects under WHO auspices.

As the result of meetings of the Institute's Director with the Director of the Pan American Health Organization, a wide-ranging multinational project is now underway in the Western Hemisphere. This project has four over-all objectives:

- (1) To gain knowledge on several aspects of the natural history of alcoholism in Latin America, particularly in regard to the prevalence of the problem, urban-rural distribution, attitudes toward drinking, drinking patterns, sex differences, and economic impact;
- (2) To determine the role played by alcohol consumption in road, home and industrial accidents and acts of violence, particularly suicides and homicides;
- (3) To promote and support the establishment of centers for the study of alcoholism in two Latin American countries; and
- (4) To disseminate information in Latin America concerning alcoholism research, prevention and treatment services, and training programs.

In addition, under the Agricultural Trade Development and Assistance Act of 1954, Public Law 480, excess foreign currencies owned by the United States are made available for the support of scientific programs overseas. The Institute has utilized such funds to develop a collaborative research project with an eminent Yugoslav scientist to study the effects of parental alcoholism on psychosomatic development of children. The study is following the psychosomatic development of children of alcoholic parents, their ability to learn, their success at school, and their ability to adapt to the school environment. The development of these children is being compared with the psychosomatic development and school success of children of non-alcoholic parents.